

AN  
ACCOUNT  
OF A  
CONTAGIOUS FEVER,

WHICH PREVAILED LATELY

AT

Aylesbury, &c.

LIBRARY  
SURGEON GENERAL'S OFFICE

JUL.-18-1898

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OF THE

UNITED STATES

OF AMERICA

1864

AN  
ACCOUNT  
OF A  
CONTAGIOUS FEVER,  
WHICH PREVAILED LATELY  
AT  
AYLESBURY,

And in some of the adjacent Parts of

*Buckinghamshire.*

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By PETER KENNEDY, M.D.

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AYLESBURY:

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JUL-18-1898



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Medicina est ars conjecturalis: neque respondet ei plerumque non solum conjectura sed etiam experientia.

CELSUS.

Natura repugnante nihil medicina proficit: magis tamen ignoscendum est medico parum proficienti in acutis morbis quam in longis: hic enim breve spatium est, intra quod, si quod auxilium non profuit, æger extinguitur: ibi et deliberationi et mutationi remediorum tempus patet.

IDEM.

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T H E  
P R E F A C E.

THE following account of a disease, which spread a general apprehension throughout this town and the surrounding parts of the country for several miles, and not without foundation, is the result of a strict inquiry into its rise and progress, and of an attentive observation of the symptoms, which accompanied it, in its different periods. I have described the general plan of treatment, which I followed, without entering into a minute detail of each particular case, which would often prove a tiresome repetition of nearly the same subject. I have likewise declined giving an account of every particular circumstance, which, when several urgent symptoms pressed all together, made me determine upon a choice among these indications. There are sometimes calculations depending upon an evaluation and relative comparison of the different data in a disease,

disease, which may suggest an indication of treatment; although they may be more easily understood than described, and can be learnt only by a habit of observation. The medical reader, who must be aware of the difficulty of committing such things to paper, will therefore excuse this omission: and as to the other readers, into whose hands this pamphlet may chance to come, an attempt to execute such a detail would prove uninteresting, if not unintelligible to them.

If it were necessary to add any thing to what has been already said and written on the danger, with which crowded prisons are attended, not only to the unfortunate people confined therein; but to the community at large, the mortality occasioned by a distemper, which took its rise among the prisoners in this town, would help to shew, how much a reform in the regulations of such places is wanting: and if the following pages should awake the attention of those whose province it is to watch over a matter of such consequence to the public, I shall think my labour sufficiently rewarded.

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A N  
A C C O U N T  
O F A  
CONTAGIOUS FEVER,  
Which lately prevailed at AYLESBURY.

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*Of the Rise and Progress of the Contagious Fever.*

THE County Jail in this town, having been uncommonly crowded by the increasing number of convicts, which government was at a loss how to dispose of abroad, towards the end of the war, and by the additional increase of prisoners, which generally happens, after a peace, A few of them were seized, about the beginning of *April* last, with a fever of a very  
B bad

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bad kind, which was by degrees communicated to the greater part of the other prisoners.

In a little time afterwards, some of the inhabitants in the town were taken ill, with a familiar kind of fever, which spread itself daily more and more, till at length it became so general, as sometimes to attack every individual of entire families, either successively one by one, or two or three at a time.

Its infectious character became obvious, by its effects on those, who, from their situation, were more immediately exposed to the contagion. Several of those, who nursed patients ill of this fever, were soon taken with it themselves; and two apothecaries, who had attended some of them, were also seized with it. The one fell a victim to it, about the fifth day of his illness, and the other, after having narrowly escaped the same fate, communicated the disease, to every one of his own family.

The contagion soon spread itself to some of the adjacent parts of the country, and it was communicated to the people, in the work-house at *Winslow*, by some prisoners, who had been released from this jail.

There

There was no noxious alteration observed in the sensible qualities of the air, to which the origin of this fever could be attributed. The seasons were, in general, considered as healthy in places, which had but little intercourse with this town; and even in this very place, such families, as were upon their guard, against a near communication with people or things, likely to propagate the infection, remained free from the fever, during the whole time it prevailed.

It proved fatal to several in the jail, and the mortality it occasioned among the inhabitants of this town, and some of the neighbouring parts of the country, was likewise considerable. It was not however so great, as it is generally thought to have been, considering the numbers of those who fell ill of it.

Whenever a disease, of a dangerous nature, becomes very general, people are apt, either through terror, or misinformation, to exaggerate the number of deaths occasioned by it: they are inclined to suppose, that almost every body who dies, during the time, that such a disease prevails, has been carried off by it; without considering the great variety of other disorders, to which



mankind is subject, in the ordinary course of life.

I cannot ascertain the precise numbers, that died of this fever in *Aylesbury*, and in the other parts of the country, where it prevailed. Upon looking hastily over the parish register of this town, it appeared, that the deaths, which happened here, during the time that this fever continued, were considerably greater, than the average number of deaths, in the same space of time, ever since the year 1742.\* But upon considering, that a comparison founded on a calculation, carried so many years back, must unavoidably be subject to inaccuracy, on account of the difference, which in that number of years, must have happened, in the annual state of population in this town: I confined a more minute enquiry, to these last ten years past, during which, I have been informed, no <sup>a</sup>material difference can be supposed to have taken place, in that respect; and I have found, that the number of deaths,

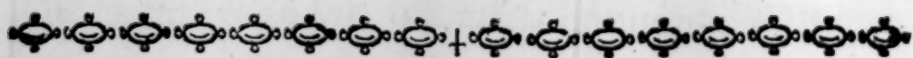
\* That year proved very fatal to the inhabitants of this town, owing to the small-pox prevailing at the same time, with another fever, of a malignant kind. A note inserted in the register mentions, that in the course of that year, no less than 148 were carried off by the small-pox alone.

during

during six months, from the appearance of this fever, was more than double the average number, during the same time, from the year 1774, to 1784; which increase of mortality cannot, for the reasons mentioned, (page 3.) be attributed to any other cause than to this distemper.

The fever abated gradually of its violence, in the jail, after the number of prisoners had been diminished, and the different rooms and cells thoroughly cleansed and purified, by proper means.\* It likewise abated considerably, among the inhabitants of the town, about three months after its first appearance, both as to the numbers that fell ill of it, and the degree of mortality, with which it was attended; but it soon raged again, with increased fury, and continued until towards the middle of *October*, when it appeared to cease altogether.

\* Besides the attendance of Mr. *Hayward*, junr. Surgeon to the jail, the advice of Dr. *Parsons*, of *Oxford*, was obtained, concerning the general plan of treatment; and the means of putting a stop, to the farther progress of the disease among the prisoners.



## C H A P. II.

*Of the Symptoms of the Contagious Fever.*

**T**HIS fever corresponds, in the general complexion of its symptoms, with that, which has been described by medical writers, under the name of *the jail, camp, or hospital fever*, on account of its having been frequently observed, among people crowded together in such places.—Several of those, who from their near and frequent communication, with people actually labouring under the disease, were more exposed to the infection, said that they knew, at what time they received it, by the insupportable vapour and stench, arising from the patients, while they assisted in moving them in their beds.

On others, the first impression was not so manifest: they complained of loss of appetite, and sickness at stomach; of head-ach, and irregular chills; but they were not so ill, as to be unable to attend their business, for a few days, before they were obliged to take to their bed.

In



In such cases as came under my observation, the disease generally began with irregular shiverings, nausea and vomiting; succeeded by great heat, and thirst; a quick, and in general a small pulse; although during the first days, it was sometimes full and strong.—A diarrhoea, of a very offensive quality, soon appeared, and often lasted during the greatest part of the disease; and in a few instances, where this did not happen, a constant tenesmus was observed in its stead.—The patients complained of great pain in their head and limbs, and a delirium very soon came on.—The white of the eyes was very red, and the countenance exhibited a heavy stupid look, similar to that of a person recovering from intoxication: there was something besides in it, which was more easily understood than described by one accustomed to see it.—Comatose symptoms sometimes appeared; but the sleep was interrupted by frequent sighs and complaints. The patients were very restless and uneasy, and could not be kept long, in the same position in bed: when asked the reason of this uneasiness, they very often could not attribute it to any particular cause.—The state of the tongue was not constant, being in  
some

some patients covered with a thin whitish and shining fur. In others it was scarce different from its natural appearance, and it very seldom exhibited that brown parched look, which is frequently observed, in many other fevers of a bad kind. In the progress of the fever, it sometimes seemed to be contracted from the apex to the root: it was with difficulty the patient could put it out, for inspection, and the voice was inarticulate, and scarce intelligible.—The urine was generally high coloured, and deposited very little sediment, even in the decline of the disease.

About the fifth or sixth day, the skin generally appeared covered with spots; nor were the hands, arms or neck, although frequently exposed to the cold air, free from them.——These spots were, for the most part, of a florid colour, and very small and close together; but they were sometimes of a purple colour, and were of a larger size, and about half an inch distant from each other: in a few cases, there was a mixture of both these kinds together.——The eruption sometimes continued on the skin, during the greatest part of the disease; but it oftener disappeared almost entirely in three or four days,  
and

and sometimes appeared again and disappeared alternately, two or three times, in the course of the disease.——It never rose above the surface of the skin; although it sometimes appeared to the eye, as if it had.

In a few instances, a swelling of one of the parotids, and of the other adjacent glands, on the same side of the neck, appeared in the advanced state of the fever, and was attended with difficulty of swallowing.

This last symptom was sometimes observed without the swelling of these glands; and upon inspection there seldom appeared to be any ulceration, or considerable excoriation on the fauces; but there was generally a great redness of these parts.——In the progress of the disease, the patients were sometimes teized with a troublesome cough, attended with very little expectoration.——Several of the patients became deaf in the course of the disease, and continued so until the end.

There was an increase of the fever, in the evening, and a remission, in the morning; but

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these



these alternate exacerbations and remissions, were not so distinctly marked, as in many other continued fevers. And they were sometimes more easily discovered, by the difference in the degree of coma, or delirium, and of the restlessness, and heat of the skin, than by any considerable difference, in the state of the pulse.







## C H A P. III.

*Of the Prognostic.*


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**T**H E prognostic, in this fever. was subject to very great uncertainty.—In most other fevers, the symptoms, which affect the different functions, generally encrease in intensity, for a certain number of days, until they come to their greatest height, or *acme*. And in cases, where the disease terminates favorably, their violence decreases by degrees, until at length the patient is left entirely free from fever. But in fatal terminations, the unfavourable symptoms encrease with the progress of the disease, and nature loses daily more ground; until at length the symptoms, which announce a speedy dissolution come on, and death closes the scene. By this means, an attentive and experienced observer, has an opportunity of foreseeing, with a great degree of probability, what the issue of the struggle, between the efforts of nature and the disease, will be.

But the progress of this fever, was often so rapid and irregular, and the appearance of symptoms, which announced the impending dissolution, so sudden, and unexpected; that the principle of life, was, as it were, suddenly suffocated: for in some instances the delirium, subsultus tendinum and convulsions came on so rapidly, that the patient was carried off in eight or ten days, or sooner. In other instances, the fever continued twelve or fifteen days, or longer, without being attended with the usual forerunners of imminent danger: when convulsions, hiccup, difficulty of swallowing, syncope and other alarming symptoms coming on suddenly, the patient was carried off, without that gradual succession of symptoms, which usually precede the fatal termination of other fevers. When the disease terminated in a favourable manner, the delirium, diarrhoea, and head-ach, began to decrease about the third week, and the other symptoms gradually mending; the patient was at length quite free from fever. — Those who recovered, were reduced to a great state of debility, and were a long time regaining their strength.



## C H A P. IV.

*Of the Causes of the Contagious Fever.*

THE resemblance between this fever, and that which broke out in the jail, \* joined to the circumstance, of its having appeared so soon after the latter had been discovered, to be of a contagious nature, leaves no room to doubt, but that the contagion spread itself at first, from the people in the jail, among the inhabitants of this town and neighbourhood, by means of the intercourse which took place between them.

As to its origin in the jail, I conceive but two ways of explaining it: the first is by supposing, that the contagion might have been accidentally carried there, by people sent thither,

\* Mr. *Hayward*, assured me, that he perceived no material difference, between the symptoms of the fever, which prevailed among the prisoners; and of that, which raged, among the inhabitants of this town and neighbourhood,

from



from other infected places. It is well known, that immediate communication with people actually labouring under an infectious fever, is not necessary to produce it in others. The seeds of infection may be carried to a great distance, in cloaths, or other vehicles; and they may, after a length of time, communicate the disease, as effectually in this manner, as when recently emitted from infected people. †

The second, and which I think the most probable manner of accounting for it, is, by attributing it to the air, which had been contaminated by the effluvia of a number of people, pent up in too narrow a space, and who cannot be supposed to have paid much attention to cleanliness in their persons or cloaths; nor perhaps to the frequent admission of fresh air into the chambers. ‡ The effect of the air thus contaminated by human effluvia, in producing diseases

† It is related in the works of a very celebrated physician, that the plague was communicated by some villains in *Germany*, several years ago, to numbers of people, by these means. But it might, perhaps, be improper to make the process, by which this was done, generally known.

‡ There is a ventilator in the jail, which has been out of repair, and unfit for use, a long time.

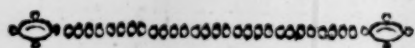


of this kind, is founded on so many repeated observations, as not to admit of the least doubt.

It would be foreign to my purpose, to investigate either the manner, in which a fever, of this kind is originally generated, by the cause above-mentioned; or to endeavour to account for the manner in which, when it has been thus produced, the effluvia of a person, labouring under it, operate in producing a similar disease in other people, by mere infection, and without the assistance of the causes, by which it was at first generated. These are questions, which, although they might, perhaps allow an unbounded scope for ingenious speculation; would, in my opinion, afford but very little room for experimental enquiry.

I look upon the contagious effluvia, to be a poison *sui generis*, very different, in their nature, from such other poisons, as come under our observation; and as the theory, even of the latter, is involved in very great obscurity; that of the former must be subject, to still greater difficulty; as it relates to a subject, of too subtle a nature, to come under the cognizance of our senses, and is connected with  
operations

operations of the animal œconomy, probably of too hidden a nature, for human penetration to come at, in a direct manner. Any attempts to explain them by analogy, with the phænomena, observed in fermentation ; or with any other property of inanimate bodies, would prove vague and unsatisfactory.—We are therefore confined, merely to a knowledge of the symptoms, they produce, when they have been applied to the human body.



The aversion, which people had, to suffer the bodies of their deceased relations, to be opened, deprived me of the opportunity, of making any observations, on the state of the different cavities and viscera, after death.—I regret this the more, because, as some of the patients, who died, expired at very different periods, from the others ; from the fourth or fifth day, to the third or fourth week of the disease : anatomical inspection might probably, have afforded a more satisfactory knowledge, of the comparative state of the parts, in these several stages ; than can be obtained in diseases, which are more uniform and regular in their duration ; and in which, dissection, for that reason,

son, only exhibits a view of the morbid state, which took place after the disease had lasted several days, and often leaves us in uncertainty ; as to the condition of these parts, in the earlier stages thereof.

The prejudice, which people in general, entertain against consenting to a proposal of this nature, proves no small impediment to the progress of physic, by depriving practitioners of an advantage, which might throw some light, on the obscure nature of several diseases. \*

\* It must, indeed, be confessed, that in some cases, anatomical inspection would prove of little or no use in leading to a knowledge, either of the cause, or the seat of the disease. The principle of life is sometimes destroyed by causes, which leave no visible trace of their action, on any particular part of the body ; but in the greater number of diseases, that end in death, some one or more of the inward parts shew, upon examination, evident signs of the morbid impression.







## C H A P. V.

*Of the Treatment of the Contagious  
Fever.*


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**M**Y first care, in the treatment of this fever, was to recommend the strictest attention to be paid to the correction, and frequent renewal of the air in the chamber, and to cleanliness about the patient. A proper regard to these particulars is useful in every fever; but more especially so, in fevers of this kind, in which the air being contaminated, by the constant supply of contagious effluvia, from the patient's body and evacuations, renders the disease more malignant: and likewise exposes the family and attendants to a greater danger of being infected. —The floor and walls were therefore, frequently sprinkled with a decoction of rosemary, pennyroyal, or other aromatic plants, in vinegar; or with camphorated vinegar. The vessel containing these ingredients was kept constantly boiling in the room, and the air was impregnated with an agreeable



able perfume, by shutting the doors and windows now and then, and burning frankincense, or a lump of sugar ; and in the intervals of these fumigations, the air was allowed to pass freely, through the chamber, by keeping the door and a window open during the greatest part of the day. The patient's hands and face were frequently washed with vinegar and water ; their linen and sheets were shifted as often as it was found necessary, and the foul cloaths and faeces were immediately removed out of the room.

The debility was so predominant, and the progress of the disease in general, so rapid and alarming ; that it would have been imprudent, to trust so far to the mere efforts of nature, as to remain an idle spectator, and wait in hopes, that a spontaneous solution of the fever might point out a future imitative plan of treatment, best calculated to remove the disease.

On the other hand, I knew of no antidote capable of correcting, by any specific property, the noxious quality of the infectious miasma, when received into the body, and thus nipping the evil in the bud.—I was for these reasons, obliged to confine myself to such a plan, as I thought

best calculated to obviate the symptoms, according as they appeared ; and I endeavoured to modify the treatment, in such a manner, as to adapt it to the different indications that offered, in proportion to their degree of urgency.

When the patients complained of nausea and giddiness, I ordered a vomit of emetic tartar, or ipecacuanha, which sometimes brought up a great deal of corrupted bile ; and likewise operated by stool. At other times, it only brought up a very small quantity of less offensive bile, or insipid phlegm : and when, from the effect of the vomit, I had reason to suspect, a considerable quantity, of foul humours, in the stomach and bowels : I directed the evacuation, both by vomit and stool, to be kept up, by small doses of emetic tartar, repeated every third or fourth hour ; until I judged that they were pretty well cleared of their contents.

As the skin was, for the most part, very hot and parched ; I ordered the same preparation, \* in still smaller

\* Emetic tartar may, in my opinion, be managed in such a manner, as to produce every advantageous effect in fevers, that can be obtained, from *James's Powder* ; and

smaller doses, and at longer intervals: and I recommended a plentiful use of warm diluting drinks, with nitre; or other neutral salts. But I seldom observed that free and copious perspiration, which is generally produced, in other fevers, by these means. Sometimes I likewise directed bricks made red hot, and immersed in boiling water, to be applied, wrapt up in flannel, to the soles of the feet, but without much effect.

The head-ach and delirium being accompanied with great redness of the face, and white of the eyes, and indicating a considerable determination of the blood to the vessels of the brain, and its membranes; I endeavoured to make a powerful revulsion from these parts, by leeches applied to the temples, by the frequent application of fomentations, with cold vinegar to the head; and at the same time, warm poultices of bread and milk to the feet. I sometimes substituted sinapisms instead of the poultices: and when these different means proved ineffectual, I ordered

as it is a preparation, which can be procured at a much cheaper rate, and is, for that reason, less liable to be adulterated: I generally give it the preference; unless the patients, or their friends, should place their confidence in the latter; which is sometimes the case.

blisters



blisters to be applied to different parts of the body; but I have not found their application attended with that success which some medical writers have observed in these kinds of fevers. They were more serviceable in cases, where the delirium was attended with stupor and coma, than where it was of the furious kind. In some of these last cases, they were evidently detrimental, by encreasing the irritability, already predominant in the system, and where the delirium was attended, with tremor of the hands, fixed eyes, and total want of sleep: the patients found much more benefit, from the fomentations above-mentioned; and from saline draughts, joined to opiates, and *liquor anodyn miner Hoffm.* — By these means, a refreshing sleep was procured, from which, they generally received, a calm of some hours duration.

When the pulse, during the first three or four days, happened to be full and strong; and accompanied with head-ach, redness of the face and eyes, and great heat on the skin: I directed nine or ten ounces of blood to be taken from the arm; but in a day or two it grew weaker, and the artery sunk under a light pressure of the fingers. This circumstance deterred me from a repetition of the operation;

operation; except in cases where some urgent symptom increased to such a degree, as to threaten immediate danger. In one instance, of great pain in the head and breast, with a sudden increase of difficulty of breathing; I ordered bleeding so late as the fourteenth day of the illness, after fomentations, blisters, and other means had been used to very little purpose; and I observed that both these symptoms were considerably relieved thereby. The disease, notwithstanding, continued above a fortnight longer, and the patient, being quite exhausted of strength, recovered with much difficulty.

The blood drawn, in this fever, was generally covered, either with a green, or a yellowish buff, of a very strong consistency, and did not shew the appearance of dissolution, which has been supposed by many, to be the constant attendant of fevers, with petechial eruptions. In one patient in particular, it was so thick, that very little could be drawn, at the first bleeding; and the operation being repeated the next day, scarce a spoonful came away. The *serum* was generally of the same colour, with the *crassamentum*.

When

When the fever was nowise diminished by these means, and that the debility increased; I ordered mixtures composed of *Zulep e Camphora*, *spirit Mindereri* and *sal nitri*, with the addition of *Confect Alkerm*, or some other warm ingredient, and for common drink, wine whey, or barley water, with a little wine.——These drinks were acidulated with lemon juice.——I likewise allowed a little pure wine, either plain or mulled, and directed it to be repeated, according to the state of debility, and to the success with which the first trials were attended; and I sometimes added occasionally, a few grains of *Sal Cornu Cervi* to the above mixtures. The pulse by these means generally increased in strength; although seldom in frequency; and a general moisture, was for the most part, produced on the skin.

As soon as I perceived a remission of the feverish symptoms, I ordered the bark: either in substance, or in decoction, according as it agreed best; to be given every two or three hours, alternately with the above mixture: and even when the remission was not clear, if the debility increased much, and that the stools became more  
colli-



quative and offensive: I did not hesitate to prescribe it moderately acidulated with spirit of vitriol; I likewise directed their common drink to be acidulated with lemon juice, or syrup of vinegar; and recommended the use of China oranges, or of the ripe native fruits of the season.

If the purging was increased by the bark, (which was sometimes the case) I joined *Confect Cardiac*, or *Confect Damocrat* along with it.— But when the evacuation was stopped by these means for twelve or fourteen hours, or when it happened to cease suddenly of its own accord; particularly in the earlier stages of the fever: I remarked that the quickness of the pulse, the heat of the skin the restlessness and delirium were considerably increased thereby.

I likewise remarked, that in some instances where there was no diarrhœa; or where, after having continued eight or ten days, it was totally stopped, or very much checked, a tenesmus, or almost constant inclination to stool, was observed in its stead; and by the frequent repetition of contraction, and pain in the bowels, contributed very much to weaken the patients, and to sink their spirits.

I at first recommended mucilaginous drinks ; such as barley water, with Gum-Arabic and starch ; or the *Decotum Album*. Mucilaginous clysters, were likewise given, in order to take off this irritation.—But as these means were often ineffectual, I ordered as much *Manna*, or *Sal Epsamensis*, as was sufficient to procure two or three stools, for two or three days, successively. And having observed that these evacuations did not weaken the patients, near so much, as might be apprehended, considering the state of debility, to which they were already reduced : I ordered the same laxatives to be repeated, every other day ; or oftener, if necessary ; until the tenesmus was entirely removed, or considerably diminished : and these evacuations were sometimes followed by a visible, although slow amendment, in the general state of the other symptoms.

From these circumstances compared together, I was led to think, that although the diarrhœa was not attended with that speedy and decisive relief, which characterizes *Critical Evacuations*, strictly so called ; it nevertheless partook more of that character, than any other evacuation, which was observed in this fever. And in the  
future

future treatment of the disease, I was particularly cautious of checking it too much ; but suffered it to continue, within such bounds, as I thought consistent with the patients strength ; without discontinuing, at the same time, the medicines, and other means abovementioned.

I must however observe, that neither the spontaneous, nor the artificial evacuation, however copious of the stomach and bowels, did, in any instance that I know of, cut off the disease in its first stage.—Nay in a few instances, where people suspected, that they had received the infection, emetics were given as soon as they found themselves ailing ; and they likewise took a few grains of *Sal Cornu Cervi* in wine whey, for two or three nights successively, notwithstanding which they were obliged to take to their bed in a few days, and underwent the usual course of the disease.—So quick and irrevocably did the infectious miasma seem to produce its effect, when once received into the system.

In one instance, where the stools and breath were extremely offensive, and where the prostration of forces was very great ; I tried what fixed air might do, by ordering a diluted solution of



salt of wormwood in water, to be drank immediately after each dose of the decoction of bark, acidulated with spirit of vitriol: But I did not observe any material difference in the state of the symptoms after it, except that the patient complained of a pressure and uneasiness on the stomach.

When convulsions or *subfultus tendinum* came on, I ordered *Musc*, *Camphire*, and *Liquor Anodyn Miner Hoffm*, in large doses, which produced a general warm moisture on the skin, and sometimes relieved the above symptoms; but at other times they availed but very little.

In two instances where these symptoms appeared, early in the disease, the patients were put into a warm bath; and one of them afterwards wrapt up in a sheep's skin, stripped off the animal, as soon as it was killed. In both cases a copious sweat was procured, and the patients received some temporary relief; but the disease, in its subsequent stages, did not seem to be in any respect milder, than in cases where the bath had not been used.

In one of these patients, there was at first, a  
spasmodic

spasmodic stricture of the *Sphincter Vesicæ*, attended with a retention of urine, and great pain.— A considerable quantity of high coloured urine was drawn away, by means of the catheter for three or four days successively, but the convulsions soon afterwards became general, and the patient was carried off in a short time.

The cough, which was for the most part dry, became sometimes very troublesome, in the advanced state of the disease; and when it was not relieved by the use of the *Decoctum Pectorale*, or such like drinks; I found it necessary to order small doses of opiates to abate it.

The patients sometimes complained of difficulty in swallowing; and when this symptom was accompanied with an offensive stench on the breath and saliva, and that the eye could discover no ulceration, or considerable excoriation on the fauces: I suspected that there might be an ulceration situated farther back; either on some of the parts that serve for the purpose of respiration, or deglutition. I ordered the throat to be washed with gargles, composed of red wine, bark and spirit of vitriol; and directed the  
patients

patients to swallow a little of these gargles frequently, and as slowly as they could, The steam of a decoction of aromatic herbs, in equal parts of vinegar and water, was also conveyed to these parts. And in one instance there soon appeared an expectoration of purulent matter, of a very offensive quality.

But when this difficulty of swallowing was attended with a shining redness on the fauces, and without an offensive smell on the breath or saliva; I recommended the use of cooling gargles, made with barley-water, vinegar, honey and nitre

In a few instances, which occurred of a swelling of the parotid, and the adjacent glands, the tumor soon terminated by resolution; except in one patient, in whom it continued hard and painful, for several weeks after his recovery.—It was attended with head-ach, and with a numbness, and almost total loss of sensibility in the parts on the same side from the swelling, as far as the *Symphisis maxillæ inferioris*.—A blister having been applied to the numbed parts, with very little success, I directed a caustic to be laid on the tumor, and a constant drain to be kept open



open by means of proper irritating applications. And I remarked, that when the suppuration was diminished, by the healing up of the ulcer, the pain in the head, and numbness were considerably increased: and that the repetition of the caustic relieved these symptoms again. It was therefore repeated as often as it was necessary, and by the occasional application of poultices, and the help of a few saline purges, the tumor gradually subsided; but the parts have not yet quite recovered their feeling; and the head-ach is perceived at times, although not near so violent as before.

The deafness, which was sometimes observed in this fever, did not seem to claim any particular attention, either as requiring any material addition to the usual plan of treatment, or as affording any certain ground whereon to establish a prognostic. It was sometimes a concomitant of the disease, whether the patient recovered or died.

I met with only one instance, in which the functions of the brain were scarce affected. This Patient was covered almost from head to foot, with large purple spots, intermixed with an eruption

tion of smaller ones of a florid colour. The parotid, and the neighbouring glands, on one side of the neck were swelled ; and the patient was reduced to an extreme state of debility, by a dysenteric flux, of a most insupportable smell. The flux being checked by opiates and the bark being afterwards given with wine, the patient recovered contrary to my expectation.

It is not a little remarkable, that this single favourable symptom should have been sufficient to counterbalance the train of bad symptoms, which were observed in this patient. And it seems probable, as far as can be inferred from one observation, that when the disease proved fatal, it destroyed the patients, by exerting its effects chiefly on the brain. Having made no anatomical observations on the bodies of those who died, I can say nothing positive in confirmation of this conjecture. But it appears to me to bear an additional degree of probability, from the observations of a very eminent physician, in similar fevers. \*

\* The late Sir John Pringle opened the bodies of some of those, who died of the *camp or hospital fever*, when he attended the army in *Germany* ; and he found evident marks of inflammation, or suppuration, which was often of an ichorous quality in the brain, or the cerebellum.

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In cases of extreme debility, where the patients seemed unable to withstand the violence of the disease much longer, I had recourse to the frequent repetition of *volatile Salts, Spirit volatil aromat*, or such other medicines as were capable of giving a powerful temporary stimulus. Topical stimulants were also frequently applied to the nostrils, and fomentations with hot vinegar to the pit of their stomach.

By the frequent repetition of these means, the vital powers, which had almost ceased, were again excited, and the patients sometimes recovered contrary to my expectation. At other times when they were in the very agonies of death, they were again revived, so as to take notice of their friends and the other objects around them, and obtained a respite of some hours, till at length the remains of life were so exhausted, as to be no longer susceptible of the impression of the most powerful stimulants, either internal or external. \*

\* I have sometimes observed, in the treatment of diseases, that when the symptoms, which are considered as the usual forerunners of death, have made their appearance, the nurses and attendants relax in following such



Several of those who recovered, were afterwards exposed to the contagion, by their continual

directions as are calculated to keep up the ceasing remains of life, on account, they say, of the inutility of prolonging the agonies of death, when the patients are supposed to be past hopes of recovery: and under this idea they sometimes suffer them to languish several hours, if not some days, without administering any thing effectual towards their relief. But from some instances, which have occurred to me on former occasions, I make no doubt, but that by this remissness, some lives have been lost, which might have been saved.—It is difficult to say to what degree the powers of life may be suppressed without a possibility of their being recalled. There are instances of patients in whom life appeared to be nearly exhausted; nay some of whom were supposed to be actually dead, and who have nevertheless recovered and lived several years afterwards.—I have been an eye witness to the recovery of children, to all appearance still-born, by persevering in the timely application of the means calculated for exciting the vital principle: And I have been informed at *Rome*, by people of unquestionable veracity, of an instance of a coachman there, who was supposed to have died of a violent fever, but while they were carrying him to the place of interment in an open coffin, as is the custom in that country, he shewed signs of life, and being carried back to his house recovered again, and is, for ought I know, still alive:—In a word, how many instances have there been of late years of drowned people, in whom the signs of life seemed to be totally extinguished, who have nevertheless been rescued from the grave,

tinual communication with those, whom they themselves had infected: but I have not observed that any of them took the disorder a second time.

A relapse was likewise very uncommon in this fever. I met with only one instance of it, in a patient, who had taken the disease by assisting to lift another ill of it out of his bed. The first impression of the infection on him, while performing this office, was so strong, that he said, (to use his own words) *he thought himself poisoned*, by the vapour which he then breathed and swallowed. He immediately took a vomit, after which he continued to attend his business, about

grave, by the means adopted by the *Humane Society*? So nice, sometimes, is the equilibrium between life and death! —It is therefore the duty of a physician, even when he perceives his patient at the approach of death, to insist on a strict execution of such directions, as he judges best adapted to spin out the remains of life as long as possible. There is no knowing what fortunate effort nature may make, so long as there is a breath of life left, particularly in cases, where the progress of the disease has been very rapid, and the appearance of mortal symptoms, sudden and unexpected. And if he should succeed once in a hundred times, his exertions will be sufficiently compensated by the satisfaction of having recalled a fellow creature to life.

a week, being unwilling to submit to confinement in bed, or in his house : although he complained of being very ill, and appeared at times to be delirious. He came at that time to consult me, when I advised him to take to his bed immediately, and ordered him another vomit, which produced a copious evacuation both ways, until the liquids taken to help the operation appeared to come away, such as they were drank. In a day or two he was covered with spots, subsultus tendinum and convulsions, particularly of the muscles of the face, were observed ; and a train of some of the other bad symptoms mentioned in the general description of the disease \* came on. The general plan of treatment mentioned above, was adopted ; except bleeding, which from the state of the pulse did not seem to be either necessary or safe, and about the twelfth day after he took to his bed, he seemed quite free from fever, and continued so for three or four days : when through his own imprudence, he took cold, by quitting his bed too soon, and going to another room and bed, where he would suffer himself to be but thinly covered. He soon became feverish and light-headed. The parotid gland on one side of the neck swelled

\* See Page 7, &c.



led a little, but the tumor subsided in a day or two: notwithstanding my endeavours to bring it forward by warm irritating poultices, with a view of having it opened by a caustic.

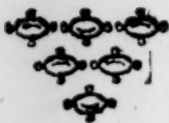
The delirium and restlessness now increased to such a degree, that it was with difficulty the patient could be kept in bed, and the other bad symptoms increasing apace, while his strength daily decreased, he died about the fourteenth day after his relapse, in spite of every means I could devise for his recovery.

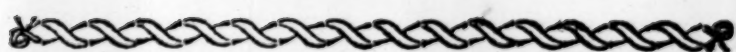
I must observe, that although the patient seemed free from fever during a few days, as was mentioned before, there was something nevertheless attending the disappearance of the feverish symptoms, which made me somewhat uneasy about his situation.

The cessation of the fever happened more suddenly than was usual, and without that gradual amendment in the symptoms, which is generally observed in safe terminations of fevers.

The patient seemed to be past all hopes of recovery from the third or fourth day after he took to his bed, until about the twelfth day, when

when the delirium and coma left him almost suddenly: the pulse appeared calm and regular, although the skin felt very rough and dry, and was at times colder than it ought to have been. The patient himself, after the sudden disappearance of the alarming symptoms, was so confident of his recovery, that he applied himself to look over his books without the least concern about his situation. But this confidence was changed into the greatest despondency after his relapse.





## C H A P. VI.

*Of the Prevention of Contagious Fevers.*

**I**T is obvious from the means, by which contagious fevers are communicated, that the most certain method of preventing them from spreading would be to institute a sort of quarantine, by cutting off all communication between the public and the sick, and their necessary attendants, within the distance at which the contagious effluvia are capable of exerting their power\* and by avoiding every thing, which may

\* This distance is probably different in different contagious diseases, and perhaps modified by the state of the atmosphere, and by the different directions of the currents of air: but I am of opinion that the effluvia of people ill of the *Jail Fever* do not, in general, extend their activity to any considerable distance, as it is observed that in towns and villages, where such a fever happens to appear; such families, as avoid a very near communication with people actually ill of the disease, and with every thing which may be likely to be a receptacle for the contagious seeds, generally escape it. And it is also observed that even in hospitals, where this disease makes its appearance; the propagation thereof is very often prevented by separating those who first fall ill of it from the other patients, and by allotting to them their separate attendants.

be



be likely to contain any of these effluvia : while at the same time, proper means are used in houses, where these diseases prevail, to correct the contaminated air, and to purify every thing about the patient, which may serve as a receptacle for the contagious seeds.\* But as a rigorous adherence to such restrictions would often prove of very great inconvenience to the usual intercourse of people with each other, a strict compliance therewith cannot be expected; except in times, when the power of the contagion is so great, and the examples of mortality so frequent, as to terrify people into a voluntary observance thereof; or to render it necessary for the police of the country, to make proper regulations for that purpose.

People therefore, who during the time that such diseases prevail, are exposed to the danger of being infected, should have recourse to such means as tend to prevent the contagious effluvia from taking effect.

\* This is best effected by fumigating the chambers and furniture, the bed and bed cloths, the wearing apparel &c. with the smoke of strong fires, on which tobacco, charcoal, brimstone or arsenic have been laid; and by washing the boards and wainscoting with hot vinegar, and the plastered walls with hot lime. The public is much indebted to Dr. LIND, for having published his observations on the efficacy of these means.

These Means may be reduced under the following heads.

1st. Such as contribute to strengthen the constitution. ( as every thing which weakens it disposes people the more easily to receive contagion ) The chief of these are as full and invigorating a diet as the stomach can digest with ease, a moderate use of red wine, or ( where people's circumstances will not allow this ) well fermented malt liquor of a good body, bitters and aromatics, such as gentian root, seville orange-peel and Peruvian bark infused in either of these liquors ; or in brandy, and taken two or three times a day between meals ; the cold bath, friction with a flesh-brush and moderate exercise. But fatigue as well as excess in victuals or drink, should be avoided, as they debilitate instead of strengthening the constitution.

2. As fear disposes the body to receive contagion, and as the disease would be attended with a greater degree of danger, if people should chance to fall ill, while the mind is thus oppressed ; it will be necessary to conquer the prejudice which commonly prevails, that few of those who

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are

are exposed to the danger of infection escape it, and that diseases of this kind are always attended with considerable mortality.

It has been mentioned above, that the effluvia of people ill of the jail fever, are not capable of exerting their activity at any great distance from the sources from whence they arise, ( see the note to page 39 ) unless they should be carried in cloths or other vehicles, ( see page 14 ) and I believe the same may be said of contagious fevers in general. But it will be proper to let people know, that even within the distance of their activity, these effluvia cannot produce their effect, unless the body to which they are applied is predisposed to receive their impression, and that the constitution of men is often not disposed for that purpose, although we are not sufficiently acquainted with all the circumstances, upon which this difference in constitutions depends, to attempt a satisfactory explanation of it.

As to the danger, with which contagious diseases are attended, it appears by the different histories which we have of them in different countries, that their degree of mortality bears no proportion to the extent of the contagion : or  
in



in other words, that a disease may spread itself by contagion, to great numbers of people, although it may be attended with very little mortality : people therefore, should not give way to too great apprehension of danger while such diseases prevail.

3. It will be right to inspire people with a proper confidence in the efficacy of certain preventatives—The means which I think most deserving of confidence as preventatives are such things as hinder the contagious effluvia from finding their way into the stomach and lungs, or such as expel them from the body before they can have time to produce their effect.

For this purpose when people go into houses where contagion prevails ; or into crowded places, where they may run a risk of meeting persons, lately recovered from such diseases ; or who may be likely to carry any of the contagious effluvia about them in their cloaths, or otherwise they should avoid swallowing the saliva or the mucus secreted in the nostrils. They should chew spanish pellitory, cloves, camphire, ginger, or some other warm pungent substance, capable of increasing the secretion of the saliva, which they

should frequently spit out. They should likewise take snuff, or wher common snuff disagrees, a powder composed of equal parts of betonica marjorane and cubebes. stimulating gargles, such as equal parts of vinegar and water with a little of the flour of mustard seed may likewise help to wash away any of the contagious particles, which may happen to attach themselves to the fauces and throat, and they may also be serviceable if snuffed into the nostrils. Smoaking tobacco may be of service, both by the increase which it occasions in the secretion of the saliva, and by the property which it possesses, of correcting the tainted air in infected places. ( see the note to page 40 ) Camphorated vinegar and thieves vinegar are likewise considered as preventatives if they are kept applied to the mouth and nostrils, by means of a sponge or handkerchief.

The advantages with which the application of blisters has been often attended in the treatment of the plague, and some other contagious fevers, made some physicians suppose that sores produced by blisters, setons, or issues might be a preventative against such diseases: but this inference does not appear to be just, and I am of opinion

opinion that when such means are recommended, it should be rather with a view of inspiring people with a share of confidence in them, than from an opinion of their possessing a real preventative virtue, in any other respect.

Various other things have been recommended as preventatives, such as amulets, necklaces, &c. composed of different substances, and although the virtues attributed to the greater part of them are founded in superstition, or ignorance ; they may nevertheless be of service, if people entertain a favourable opinion of their efficacy ; but they may on the other hand prove hurtful, by encouraging people to expose themselves rashly to unnecessary danger.\*

If notwithstanding the means recommended above as preventatives, those who are exposed to the contagion should feel any any of the symptoms, which denote that the contagious effluvia have been received into the body, such as

\* It is not indeed an easy matter to fortify the mind sufficiently with resolution against danger, by confidence in any preventatives whatsoever, and at the same time to recommend prudence to people, who are in the way of contagion, as such a caution might create a diffidence in the efficacy of these preventatives, which would tend to counteract the purpose, for which they are designed.


shiverings



shiverings, sickness at stomach or head-ach: it will be proper to have immediate recourse to an emetic, as it appears from the testimony of very respectable physicians, that contagious fevers have been often prevented by this means in nurses, and other attendants employed about the patients; although in the few instances in which I have had an opportunity of trying them in the fever, which is the subject of this pamphlet, they proved ineffectual. ( see page 27 )

Sudorifics are usually recommended after the operation of the emetic, with a view of preventing these fevers; and in conformity to general practice I have prescribed them, although without success: nor is it likely that the contagious effluvia can be carried by their means from the stomach and bowels, to the surface of the body, without exerting their assimilating power on some of the fluids. I am rather of opinion that in cases, where the fever is prevented by the above means, the expulsion of the effluvia is effected entirely by the emetic, and that the chief advantage of sudorifics consists in their helping, along with the emetic, to remove the feverish spasm, which takes place on the skin: and I am the more inclined to this opinion, by considering, that they are generally given along with large quantities, of warm diluting drinks.

S U P.



## S U P P L E M E N T.

*While this pamphlet was in the Press, the Monthly Review for last month, (Jan. 1785,) came into my hands; in which I read an extract of a work, entitled, "Appendix to the State of the Prisons in England and Wales. By JOHN HOWARD, LL. D. F. R. S. containing among other subjects, the following remarks on the Jail Fever, as the result of the Author's observations during his frequent journies.*

“ I F it were asked, what is the cause of the gaol fever? it would in general be readily replied, ‘*the want of fresh air and cleanliness.*’ But as I have found in some prisons abroad, cells and dungeons as offensive and dirty as any I have observed in this country, where, however, this distemper was unknown, I am obliged to look out for some additional cause for its production. I am of opinion, that the sudden change of *diet and lodging* so affects the *spirits* of new convicts, that the general causes of  
putrid

“ putrid fevers exert an immediate effect upon  
 “ them. Hence it is common to see them  
 “ sicken and die in a short time, with very lit-  
 “ tle apparent illness. Convicts are generally  
 “ stout robust young men, who have been ac-  
 “ customed to free diet, tolerable lodgings, and  
 “ vigorous exercise. These are ironed, and  
 “ thrust into close offensive dungeons, some of  
 “ them without straw or other bedding ; in  
 “ which they continue, in winter, fifteen or six-  
 “ teen hours out of twenty-four, in utter inactivi-  
 “ ty, and immersed in the noxious effluvia of  
 “ their own bodies. On this account, the gaol  
 “ distemper is always observed to reign more in  
 “ our prisons during winter than summer ; con-  
 “ trary, I presume, to the nature of other putrid  
 “ diseases. Their diet is at the same time low  
 “ and scanty ; they are generally without firing ;  
 “ and the powers of life soon become incapable  
 “ of resisting so many causes of sickness and  
 “ despair.”

I readily agree with the ingenious author, in  
 thinking that the above causes contribute along  
 with the want of fresh air and cleanliness to  
 produce the Jail Fever, by disposing the body  
 the



the more easily to feel the effects of these last causes. They may therefore be ranked like every thing else that tends to debilitate the body, or to sink the spirits among the remote causes of this Fever. But without meaning in the least to lessen the merit which the Author has so deservedly acquired by his publications, I cannot help observing that some of the reasons mentioned in the above quotation do not appear satisfactory.

I cannot conceive why convicts in foreign prisons should not be affected in their spirits, by the sudden change of diet and lodging, and by the other circumstances inseparable from their situation in a dungeon, as well as people in a similar predicament in England. It is not to be supposed I presume that the former are better off in the treatment they receive than the latter. But without having recourse to what the author observed in some of the foreign prisons, which he visited, he might, I make no doubt have observed, even in this country, that the Jail fever prevails sometimes very much in some prisons, while it is unknown in others; although equally crowded with convicts and other prisoners, and equally exposed to the operation of the other causes, by which he explains the production of the disease.

**H** If

If therefore I may venture to give my opinion on this subject, the difference, which is observed in the above respect, may be accounted for in somewhat a more satisfactory manner, by the accidental difference in the constitutions of those, who happen to be confined in such places.

The general causes of diseases are not sufficient to produce their effect, unless the body is fit by a certain inexplicable disposition in the constitution, to receive the impresson of these causes. This disposition is very different in different people, some being easily affected by the causes of certain diseases, which could make little or no impresson on others.\* If therefore among an hundred persons confined together and exposed to the operation of the causes, which originally

\* This disposition of temperament or *Idiosyncrasy* is I believe sometimes constant and inherent in the natural constitution of men, and at other times variable and depending upon some temporary and inscrutable alteration in the state of the body. Thus there are instances of some people, who during the course of a very long life, have never taken contagious diseases, not even that very contagious disease the small pox; although they had been very frequently exposed to the danger thereof: and there are instances of others who after having been repeatedly exposed to the same danger escaped the disease for several years; but were at length seized with it at an advanced period of life.

originally produce the Jail Fever, there should not happen to be any of a constitution fit to receive the impression of these causes, they will all continue free from the fever. But if on the other hand, there should happen to be even one individual among the number, of a constitution disposed to receive the impression, he will not only fall ill of the disease himself, but will likewise communicate it to some of his fellow prisoners, unless the intercourse between him and them be cut off in time. And if by neglecting this precaution, any of the others should take the disease, they in their turn becoming new and distinct sources of infection must necessarily spread it more and more. For I am of opinion that by far ~~the~~ the greater part of those who fall ill, take the disease by infection from those, who happen to sicken first, rather than by the power of the causes which originally produce it; and that those, who thus receive it by infection, might have withstood the power of the original causes of the disease and have escaped it altogether, had those who were first seized with it, been separated in time from the others.

With regard to the *Gaol Distemper* being always  
*observed to reign more in our prisons during*  
H 2 *winter*



*winter than summer,* It is an assertion, which I make no doubt but Mr. HOWARD must have had sufficient foundation to advance, during the course of his inquiries into this subject. I shall therefore only observe that the distemper in the Gaol of Aylesbury, was an exception to that general observation, as it was first observed in April, and ceased in October following.

F I N I S.

